Package Tracker

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Feedback

-We have uploaded the revised sequence diagram and the higher component diagram on github.

-AI component is now mainly leveraged in ETA prediction

Blockchain Component

Created some initial functions to track information such as the sender, deliverer, recipient, and status of the delivery.

Will have to test the generation of the QR code with javascript which will take more time.

Plan on trying to have the different smart contracts interact to update the delivery information to keep data more private.

AI Component

Generated and parsed primary dataset

- Automated Traffic Volume Counts (NYC OpenData)
  - Queried data for only Manhattan and years 2014-2015
  - Query resulted in about 2 million data entries
- VZV_Speed Limits (NYC OpenData)
  - Queried full data for only Manhattan
  - Need to create fast lookup table for street name -> speed limit
- All queries were sent to .csv files
- The next challenge is passing the primary dataset into a PyTorch dataloader

Testing Strategy

- Unit testing on individual components and interactions:
- Validate blockchain transactions, QR code scanning, and ETA prediction.
- Integration testing to verify that all units function as a whole.
- Performance testing
- Functional testing
- Documenting

Functional Testing

Test the core functionalities of the system:

Creating a parcel with relevant details (sender, receiver, destination, etc.).

Updating the status of a parcel (e.g., picked up, in transit, delivered).

Transferring ownership of a parcel (if applicable).

Scanning QR codes to update parcel status.